

FIG. 1
Prior Art

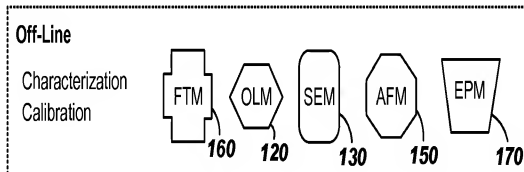
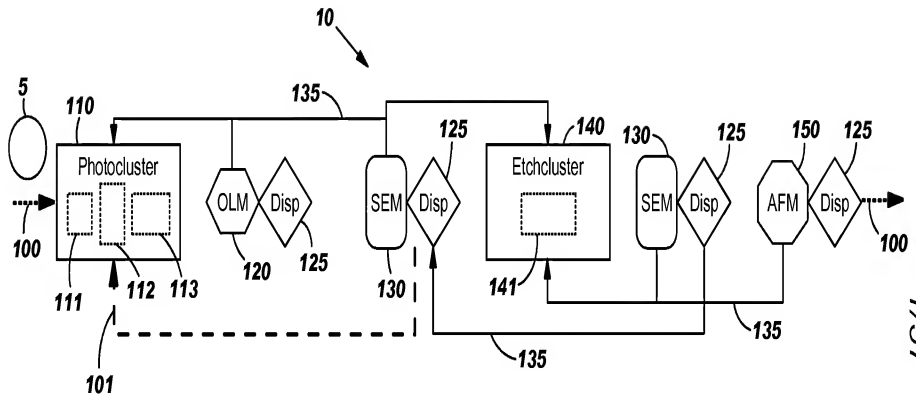


FIG. 2

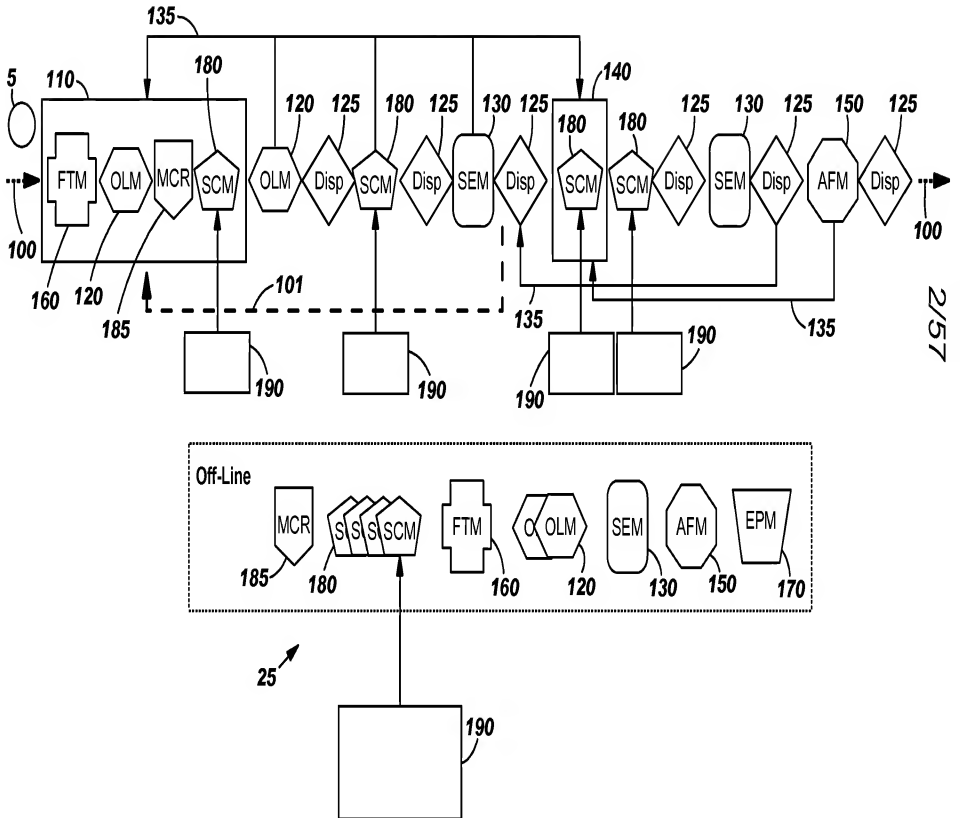
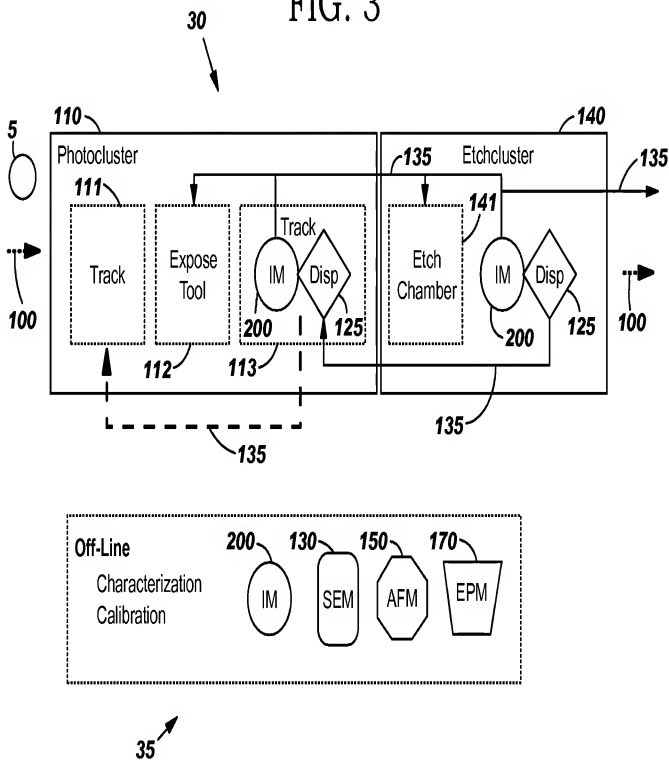


FIG. 3





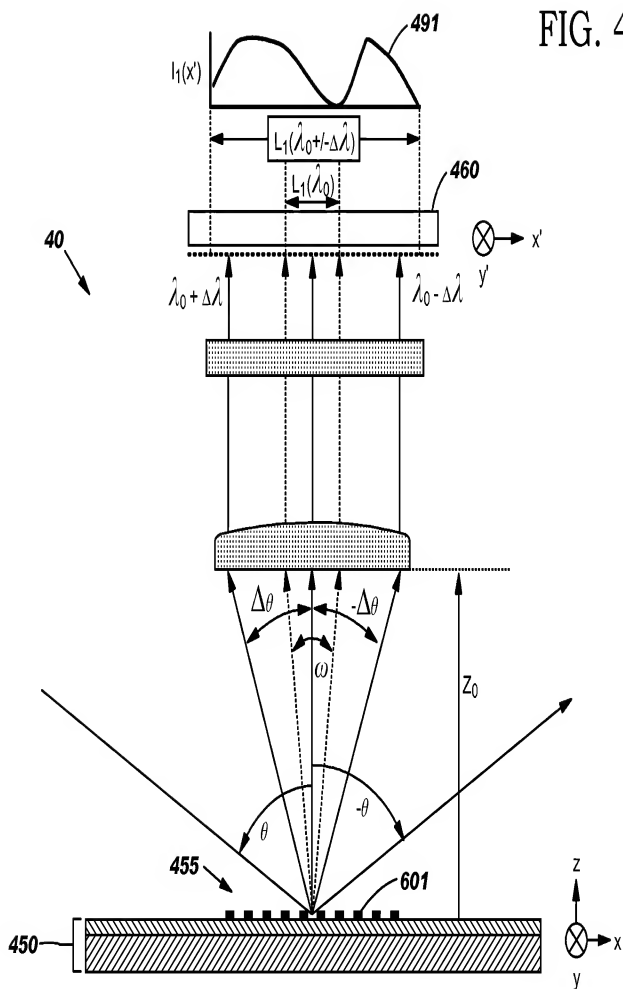


FIG. 4C

FIG. 4D

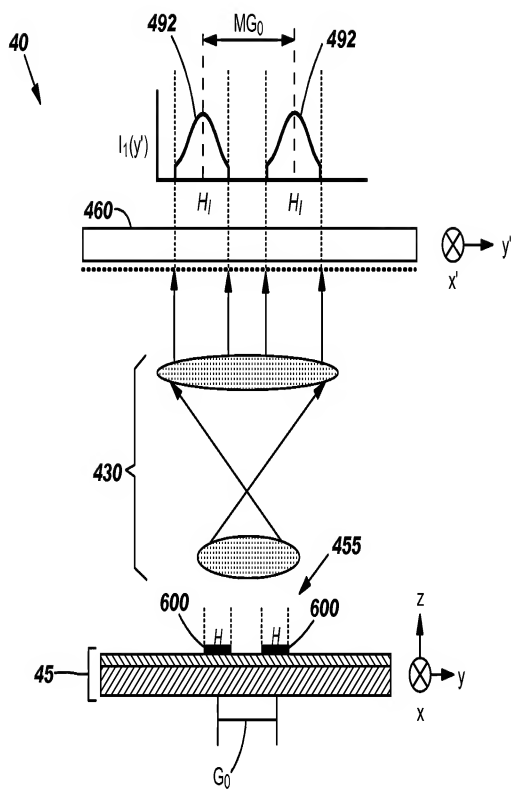


FIG. 5A

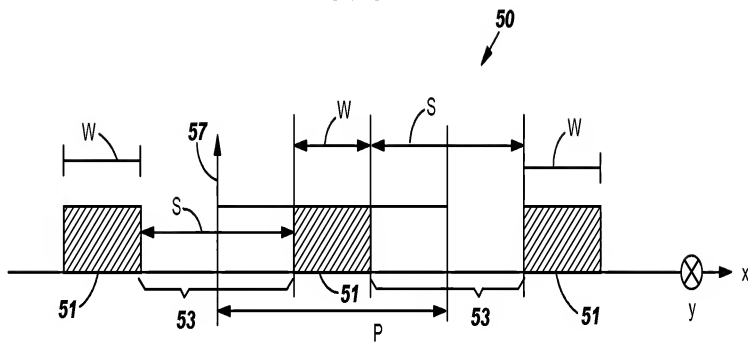


FIG. 5B

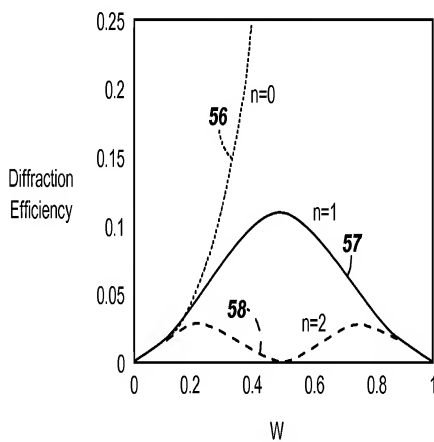


FIG. 6

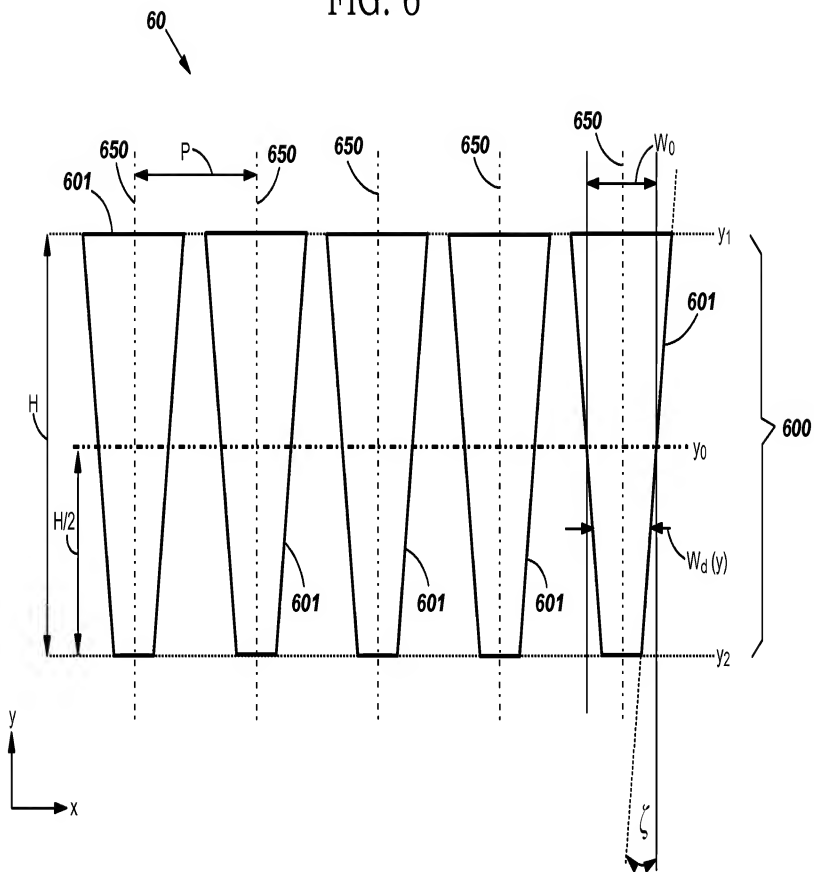


FIG. 8

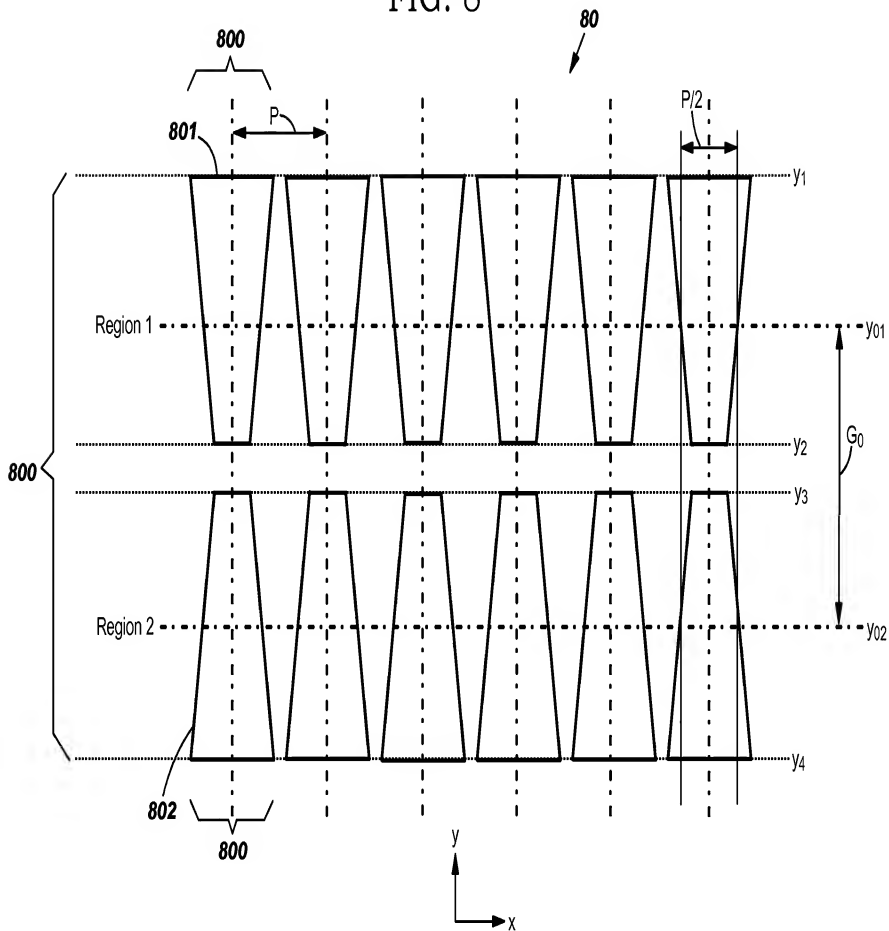
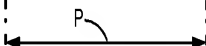
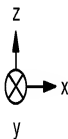


FIG. 5A is a schematic diagram of a multi-layered structure, possibly a photonic crystal or a similar periodic structure. The structure is divided into four horizontal regions, labeled Region 1, Region 2, Region 3, and Region 4. Each region contains a periodic array of trapezoidal structures. The top boundary of Region 1 is labeled 901, and the bottom boundary of Region 4 is labeled 904. The regions are separated by horizontal layers, labeled YL1, YL2, YL3, YL4, YT1, YT2, YT3, and YT4. The trapezoidal structures in Region 1 are shaded with diagonal lines, while those in Region 2 are shaded with horizontal lines. The trapezoidal structures in Region 3 are white, and those in Region 4 are shaded with diagonal lines. The width of the trapezoidal structures is labeled P, and the distance between the centers of adjacent structures is labeled P/2. The height of the trapezoidal structures is labeled G0. The vertical distance between the top and bottom boundaries of Region 1 is labeled YL01, and the vertical distance between the top and bottom boundaries of Region 2 is labeled YL02. The vertical distance between the top and bottom boundaries of Region 3 is labeled YT01, and the vertical distance between the top and bottom boundaries of Region 4 is labeled YT02. A coordinate system (x, y) is shown at the bottom right of the diagram.

903'



1002
↓



1003

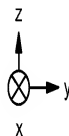


FIG. 12

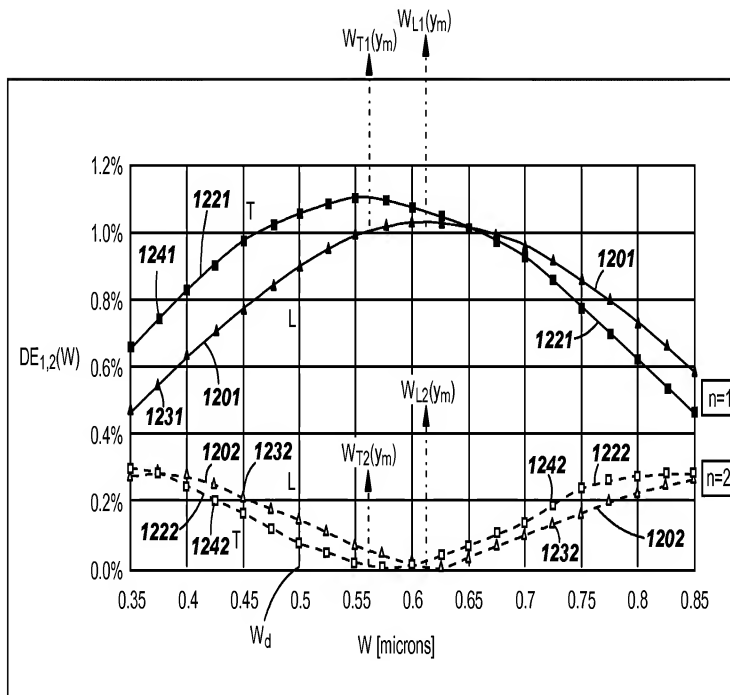


FIG. 13A

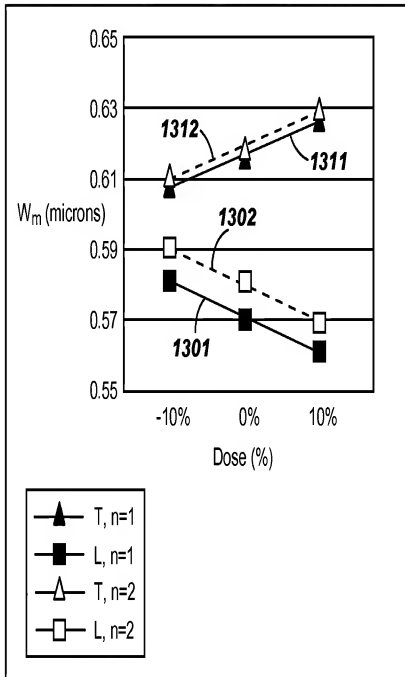


FIG. 13B

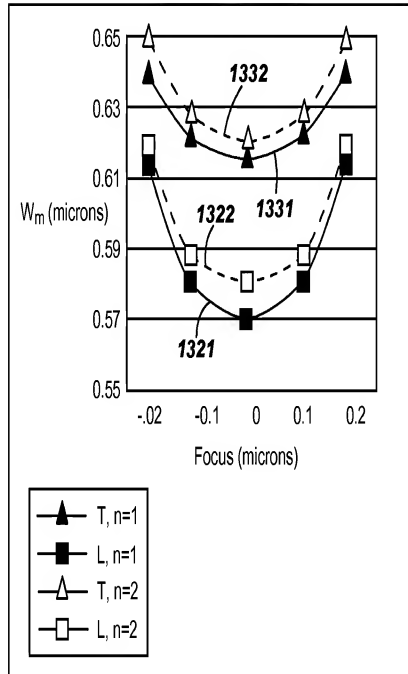


FIG. 14A

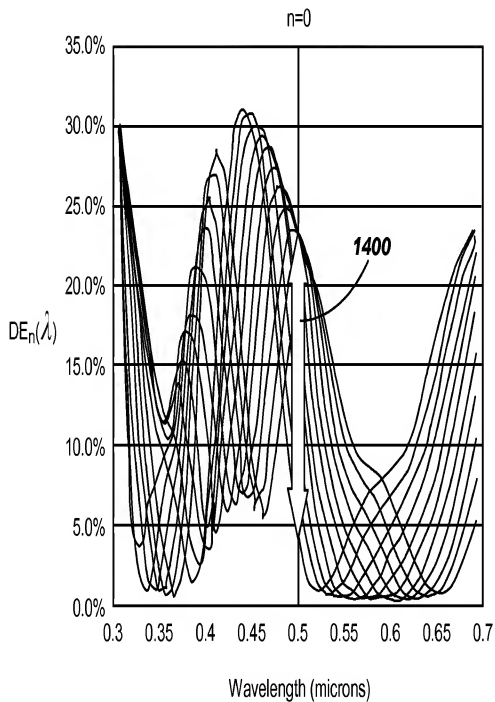
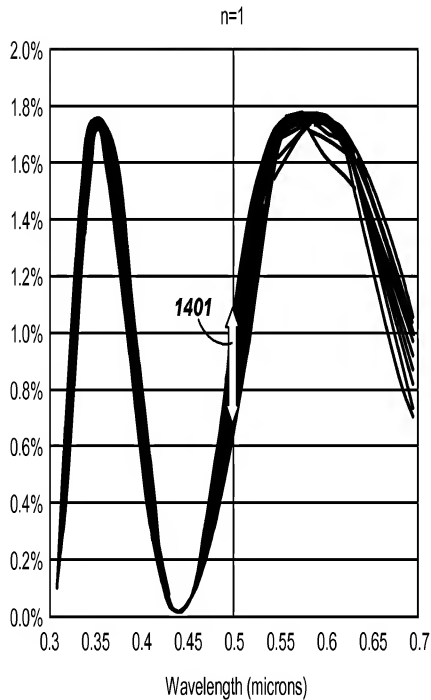


FIG. 14B



Oxide
Thickness
(microns)

— 0.45	— 0.49	— 0.53
— 0.46	— 0.5	— 0.54
— 0.47	— 0.51	— 0.55
— 0.48	— 0.52	

FIG. 15A

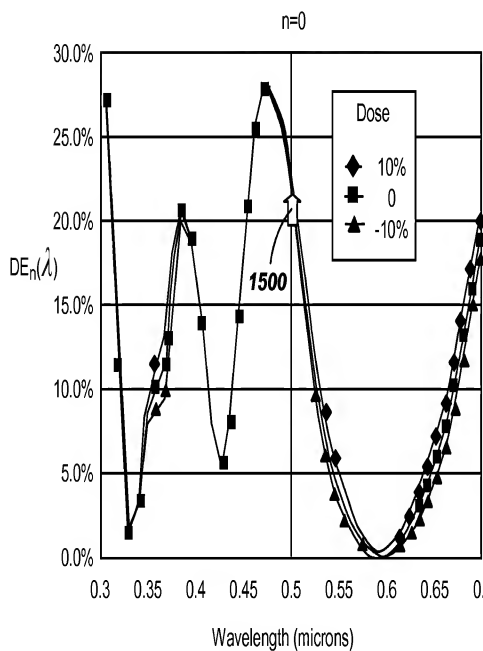


FIG. 15B

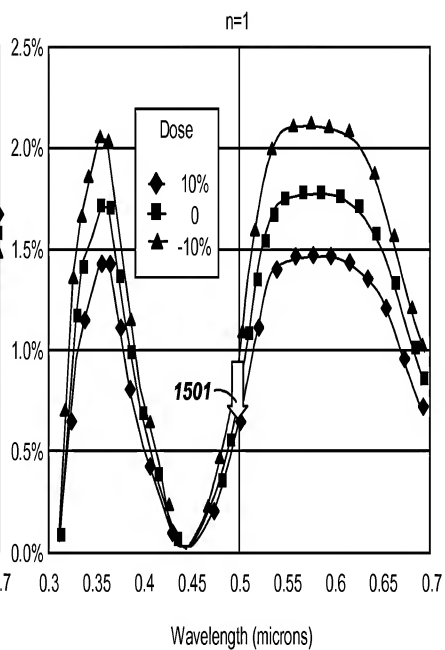


FIG. 16A

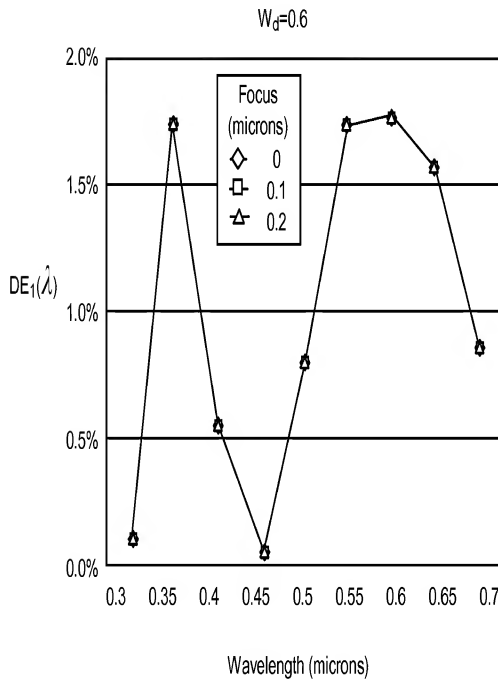


FIG. 16B

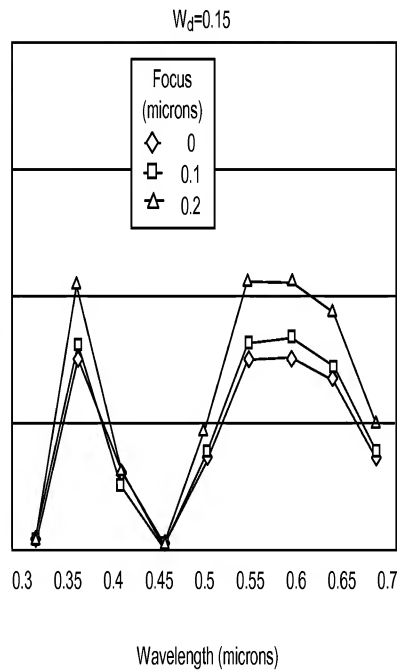
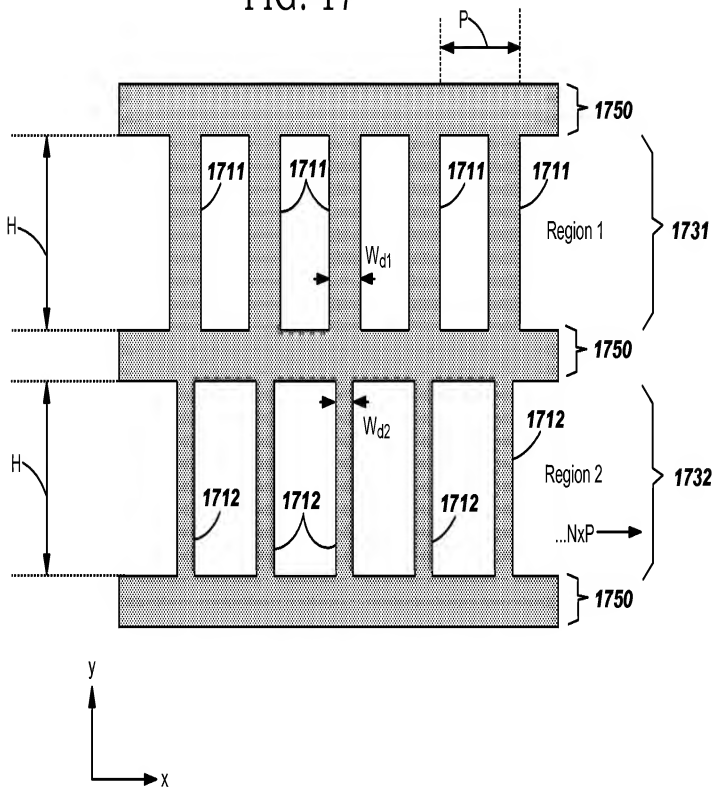


FIG. 17



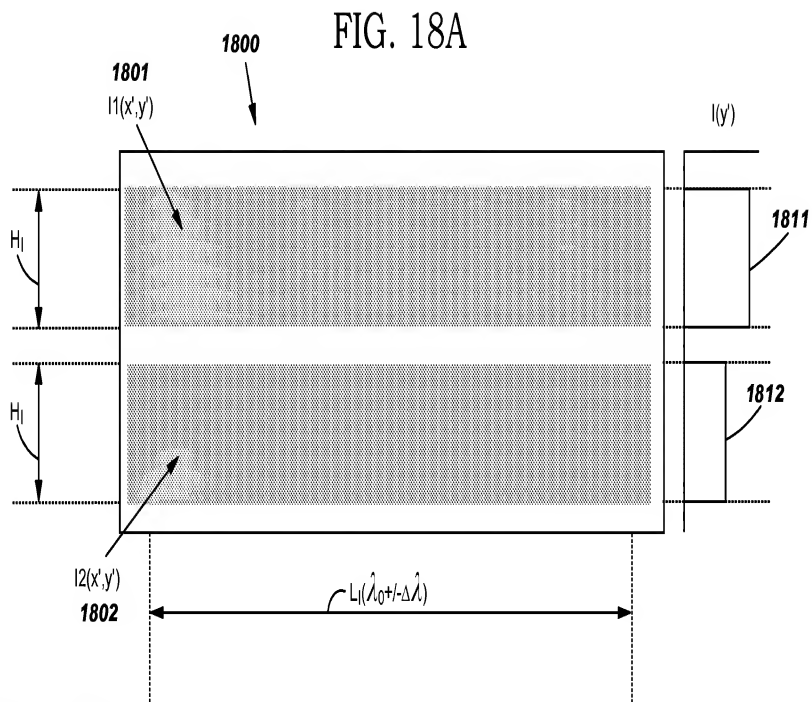


FIG. 18B

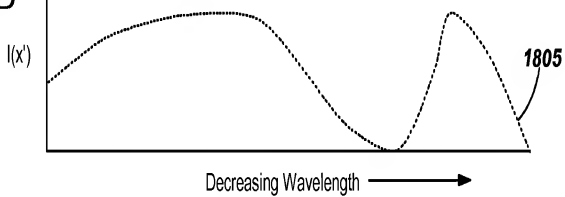


FIG. 19

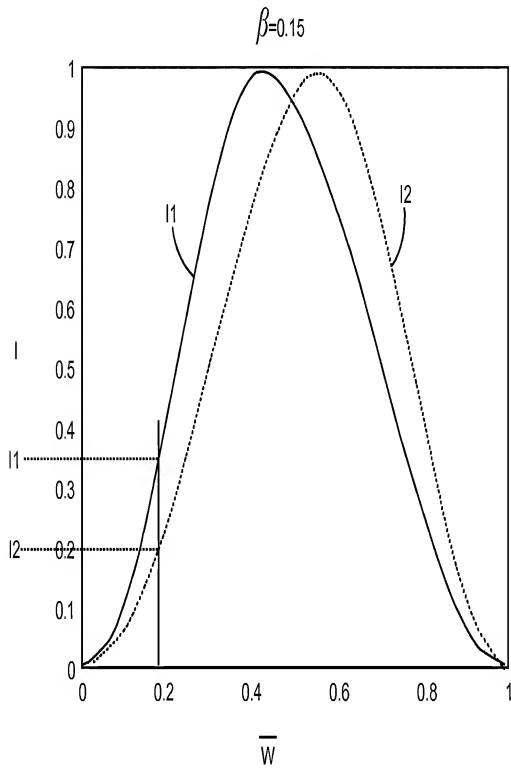


FIG. 20

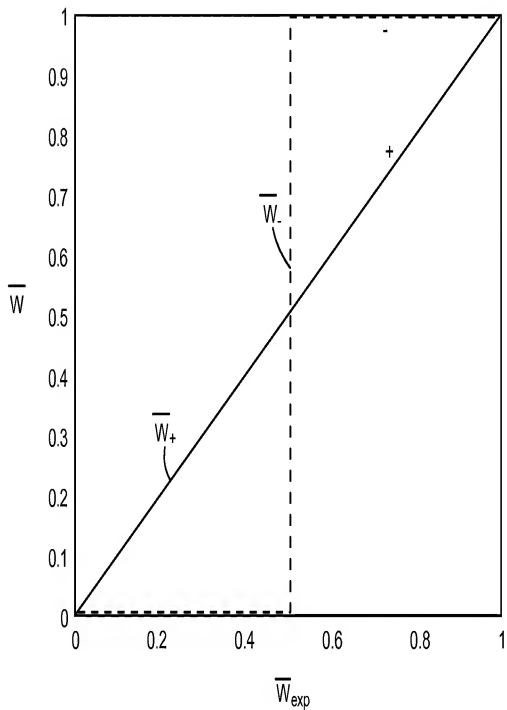


FIG. 21

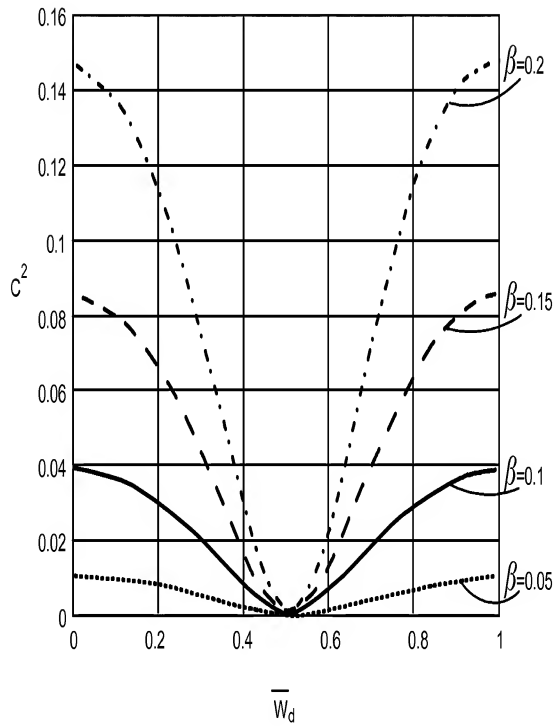


FIG. 22A

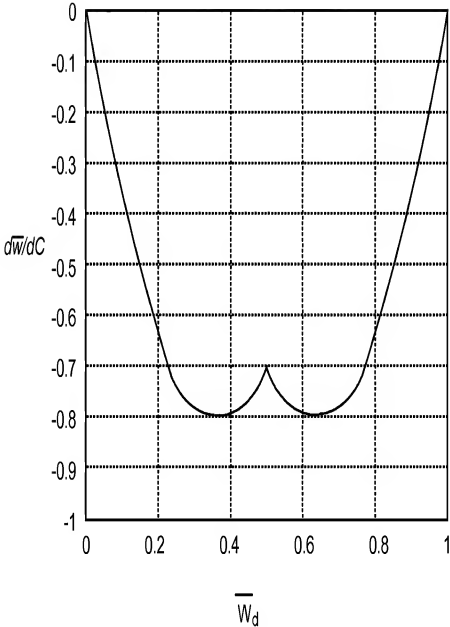
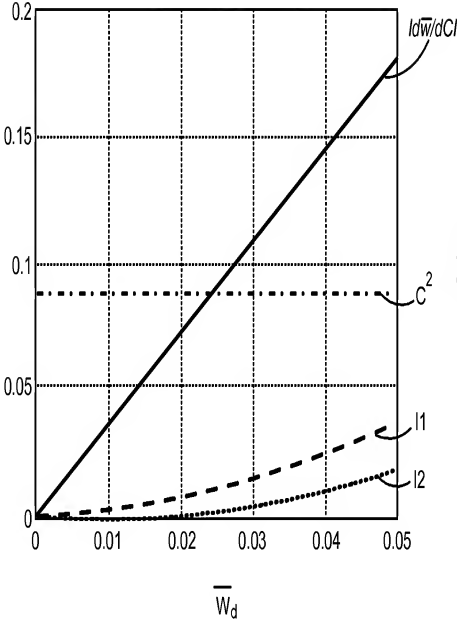


FIG. 22B



24/57

FIG. 23

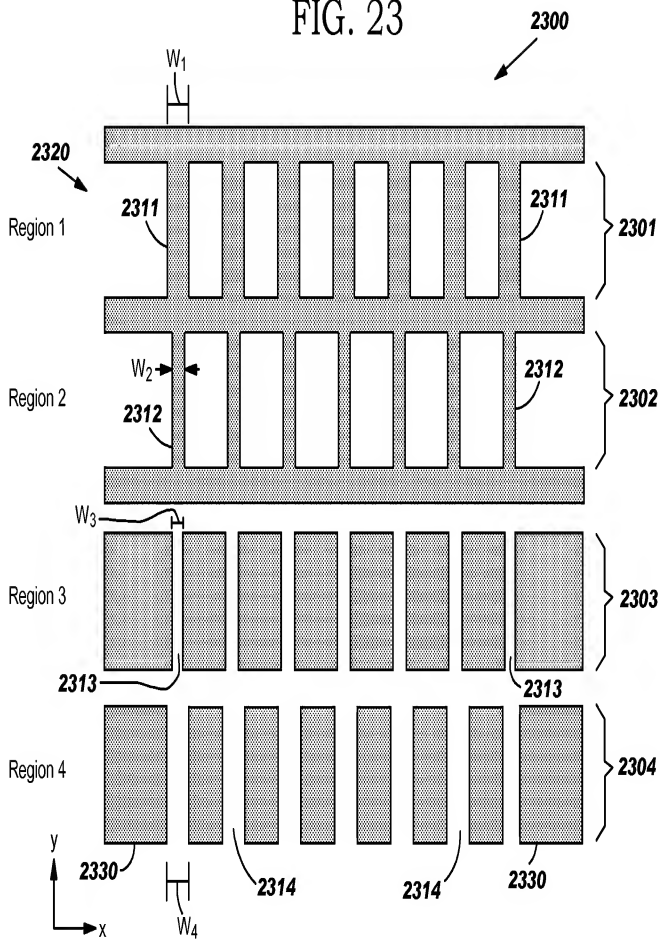


FIG. 24A

$W_{dL}=100\text{nm}$
 $\Delta W_{dL}=7.5\text{nm}$

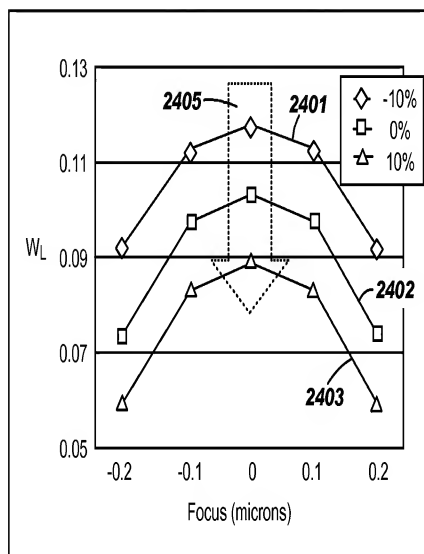
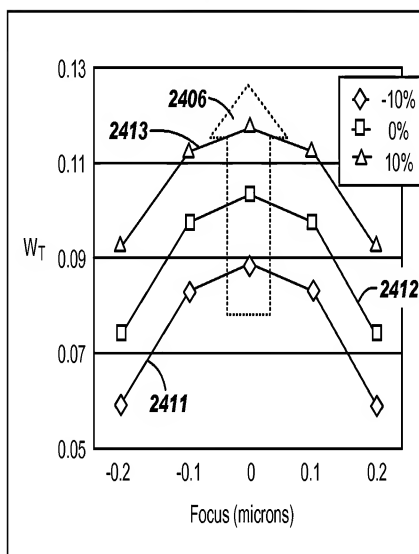
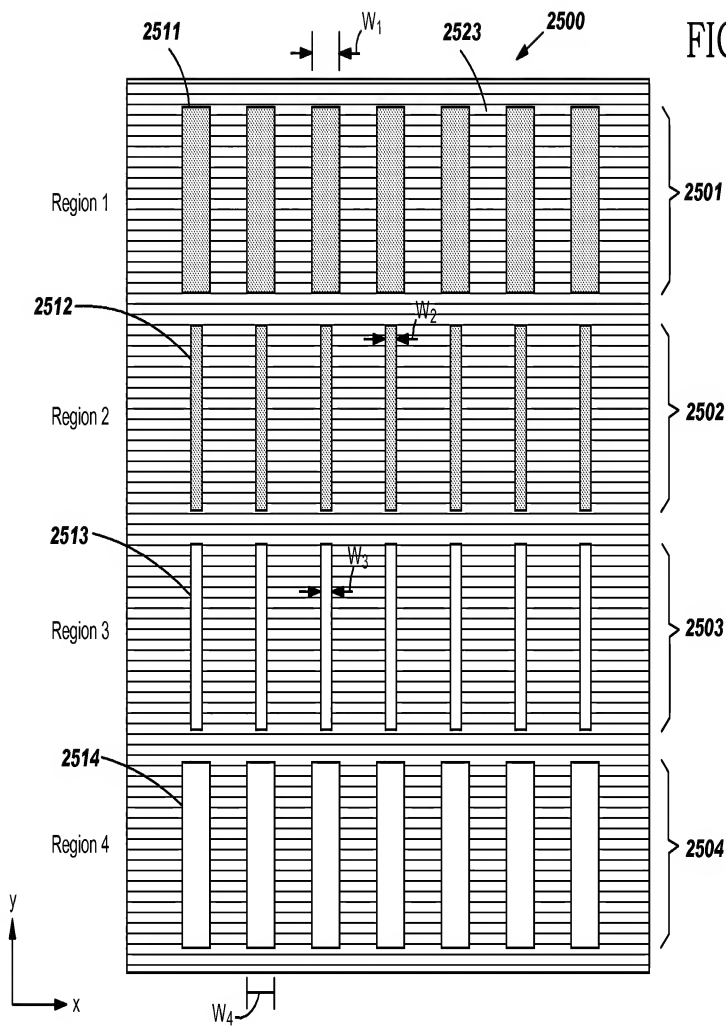


FIG. 24B

$W_{dT}=140\text{nm}$
 $\Delta W_{dT}=7.5\text{nm}$





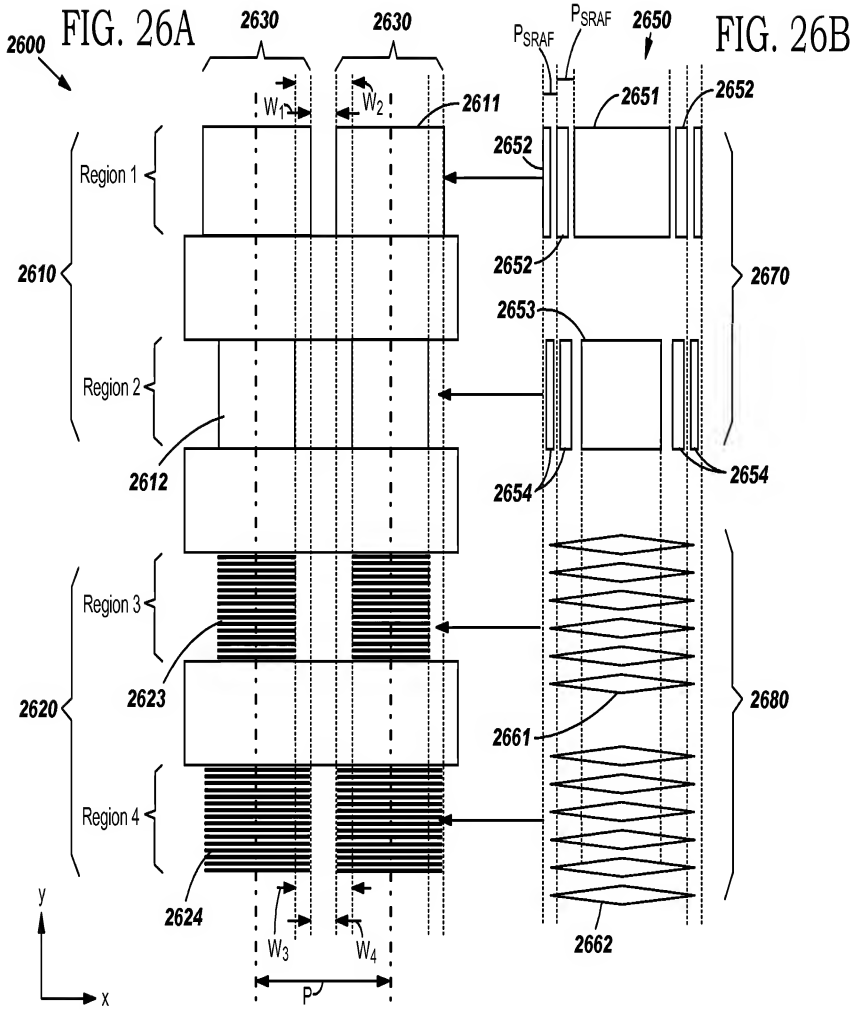


FIG. 27A

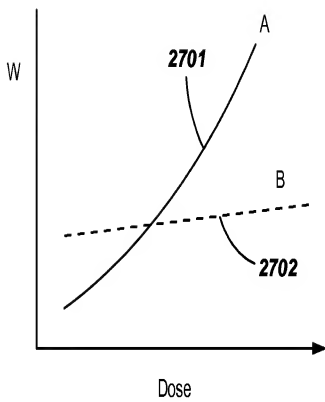


FIG. 27B

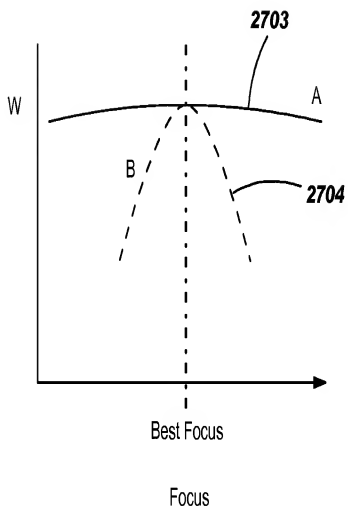


FIG. 28

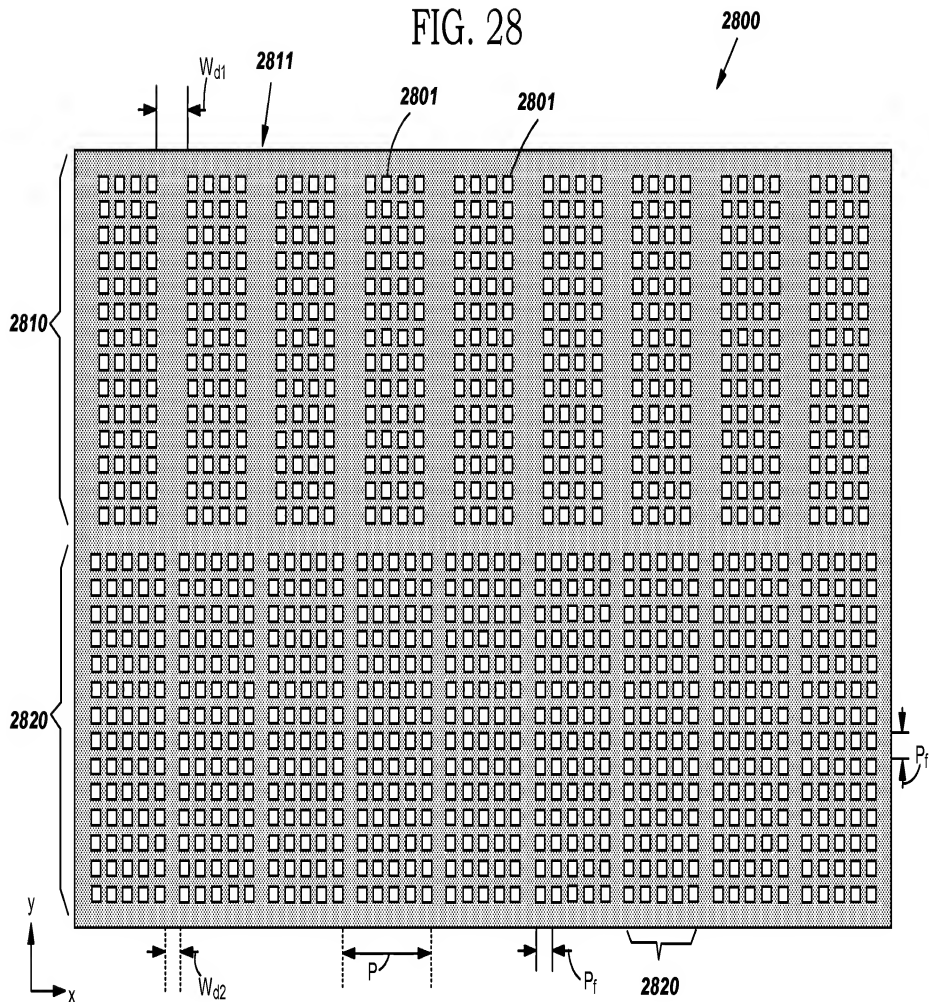


FIG. 29

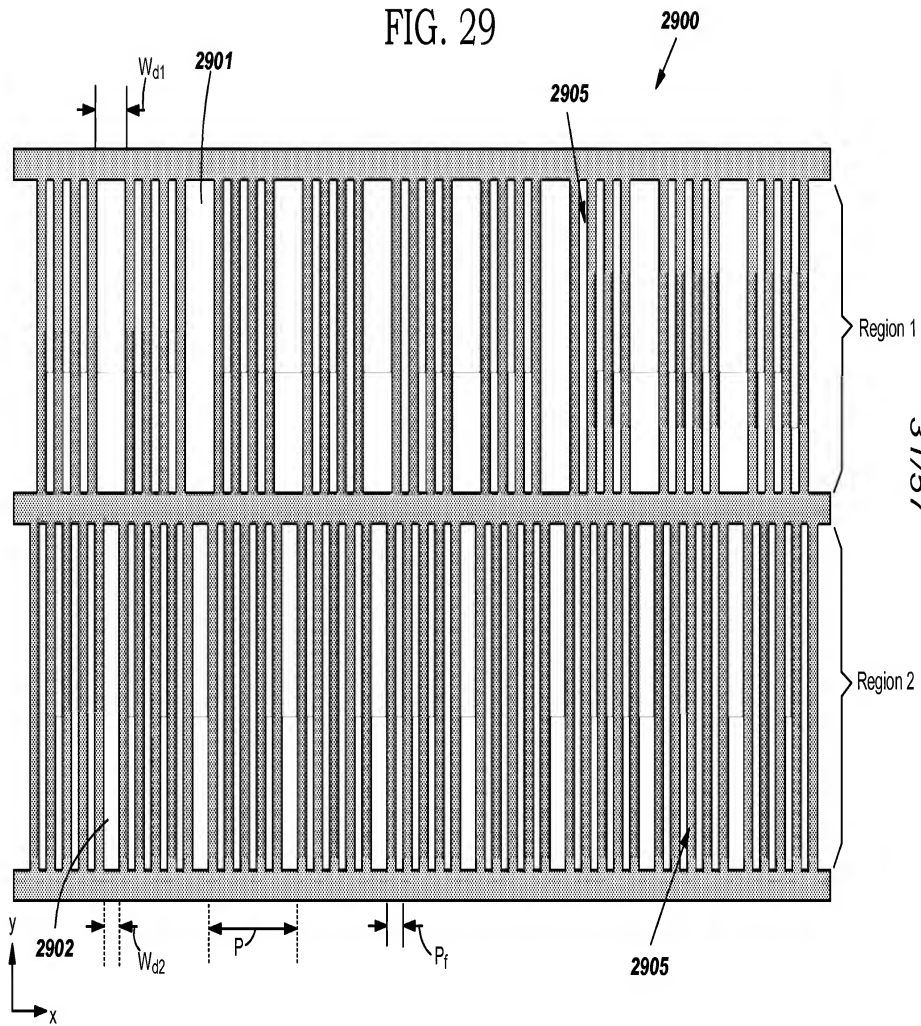


FIG. 30

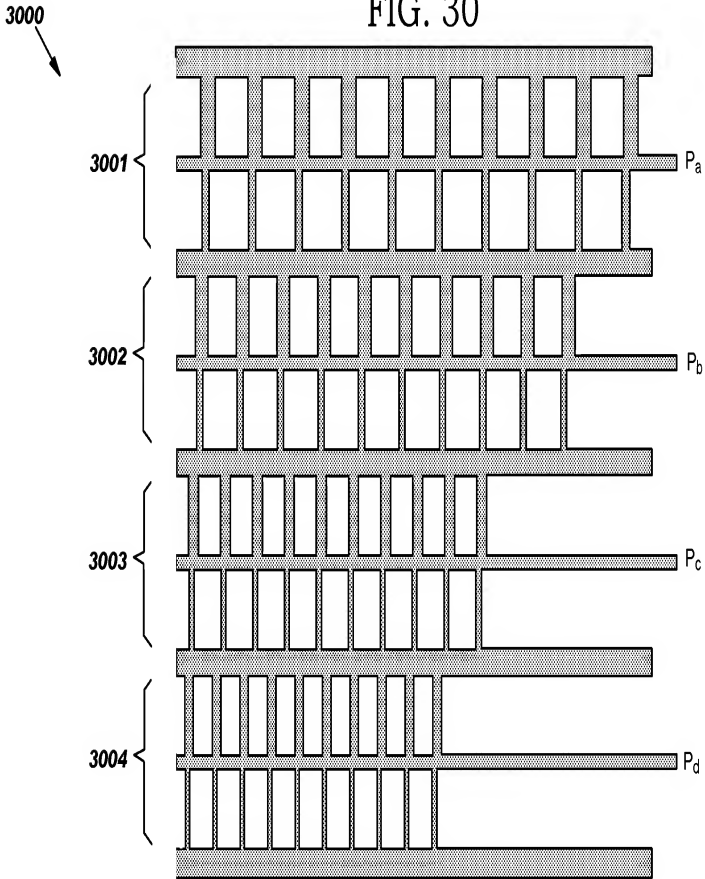
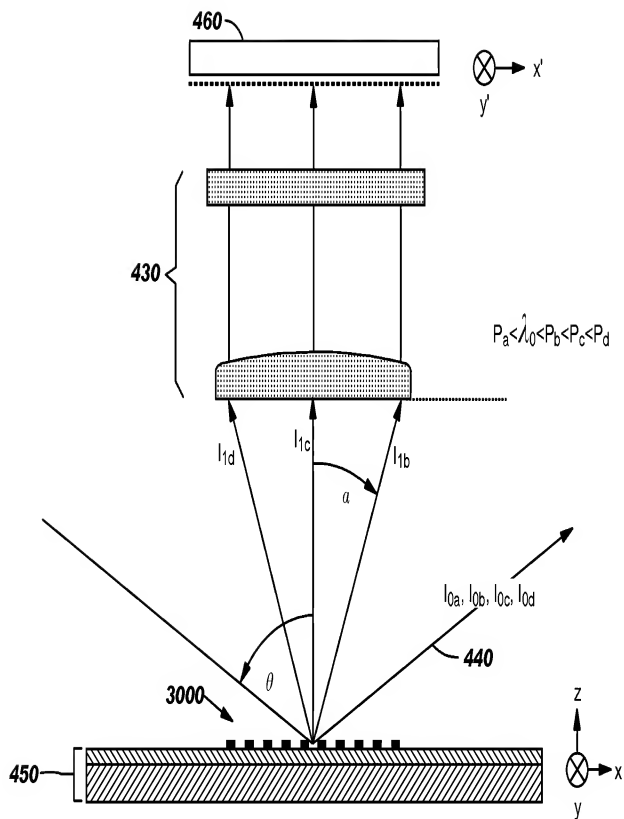


FIG. 31



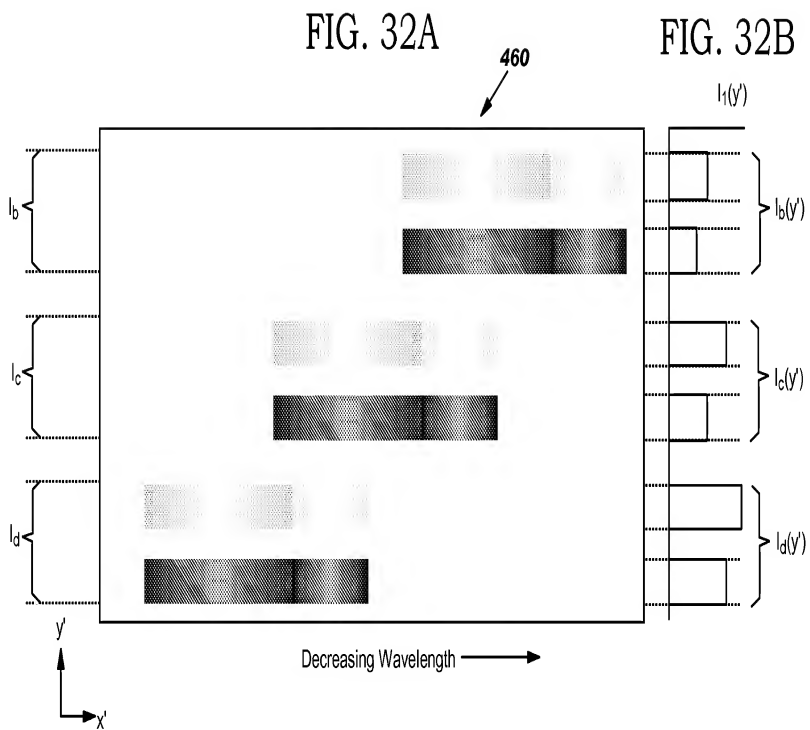


FIG. 33A

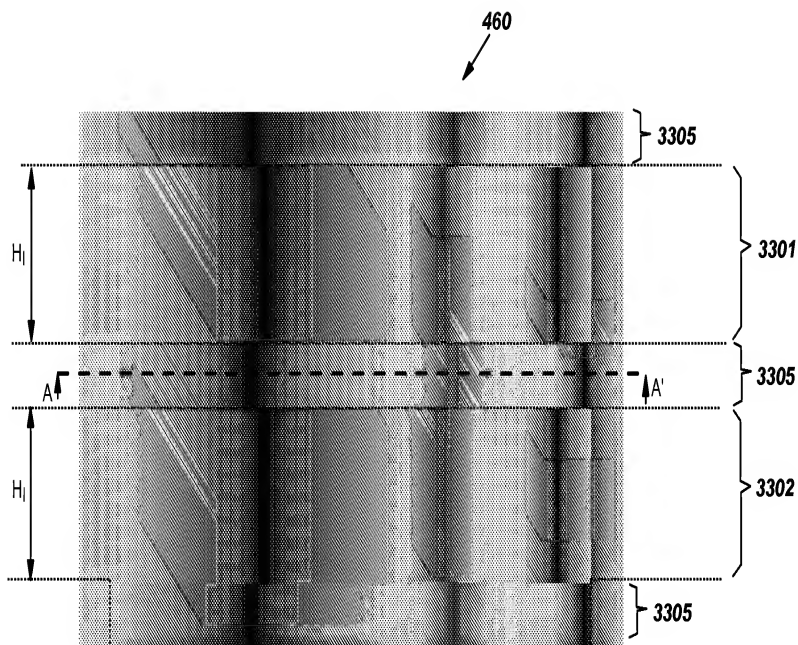


FIG. 33B

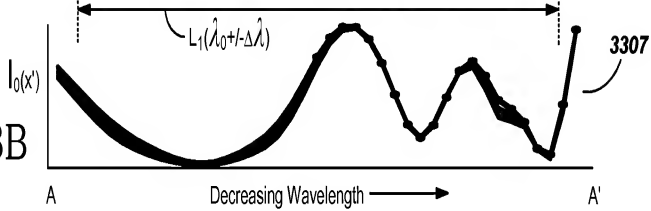


FIG. 34A

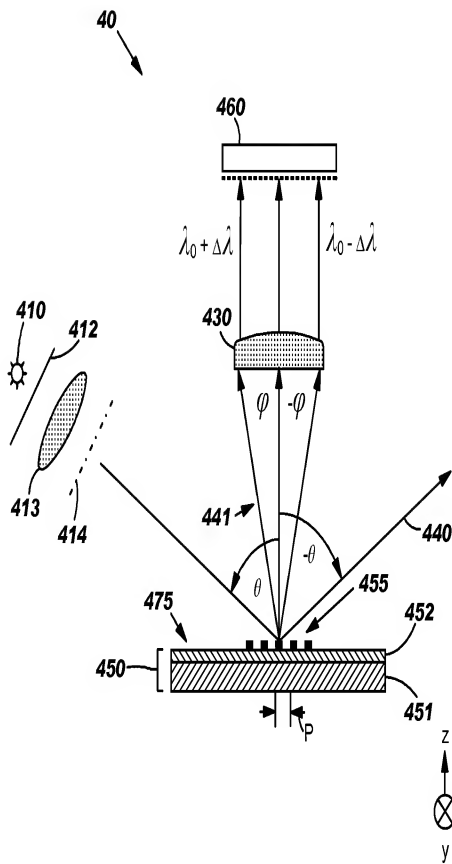


FIG. 34B

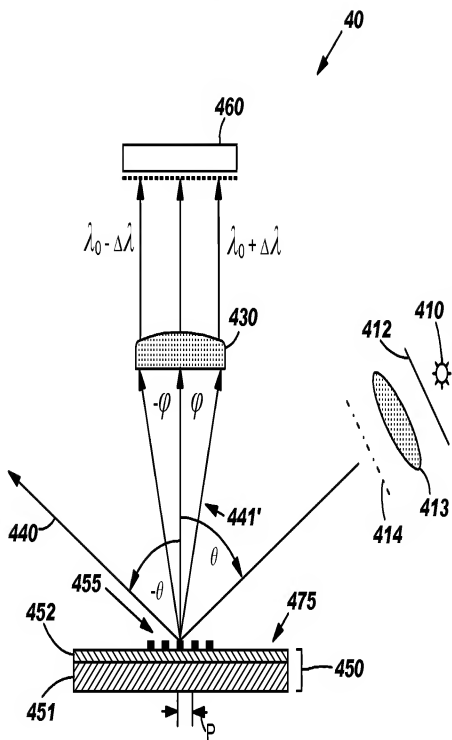


FIG. 35A

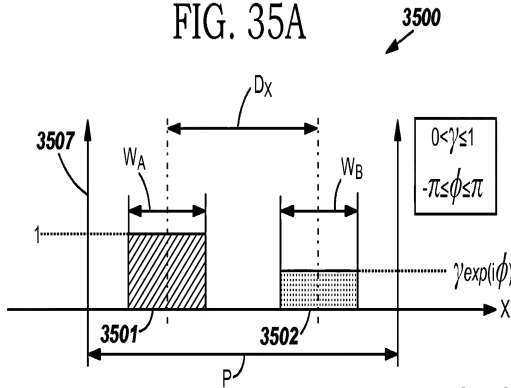


FIG. 35B

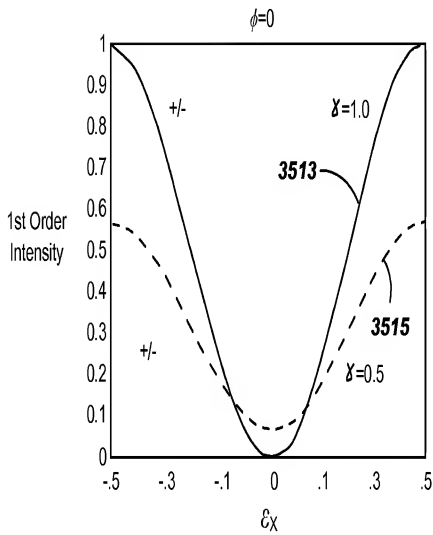
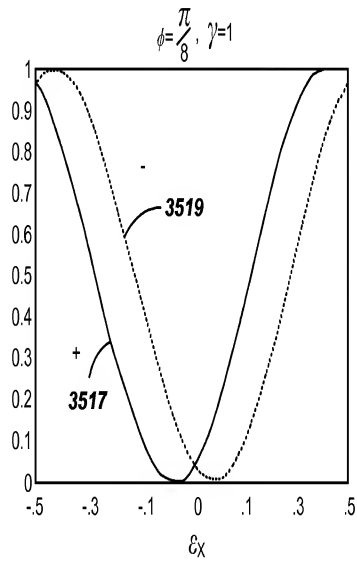
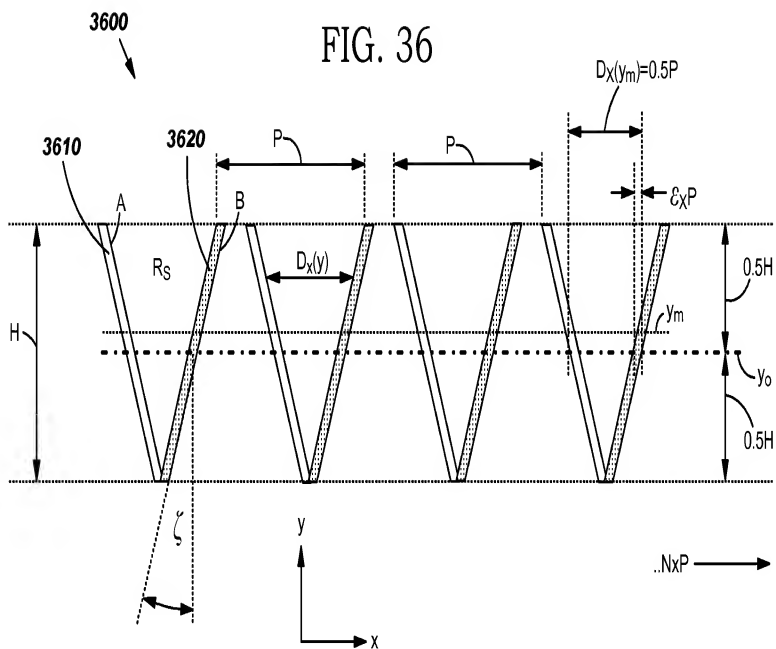


FIG. 35C





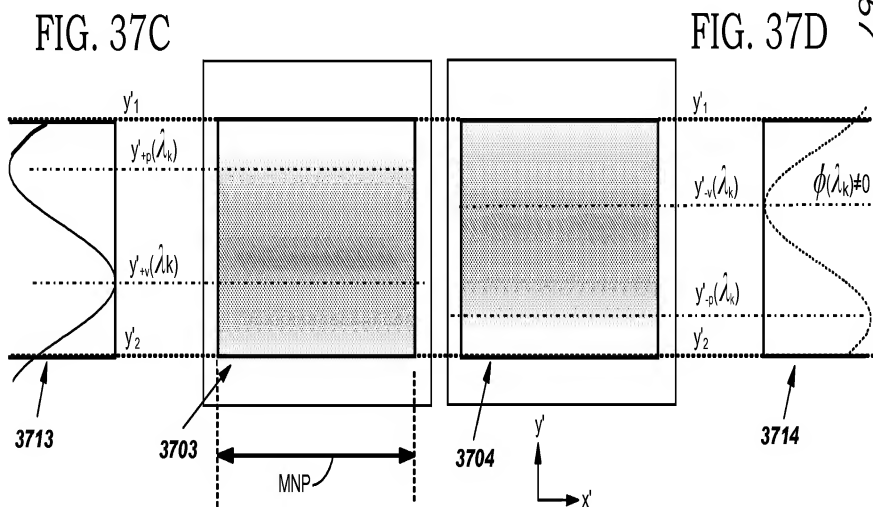
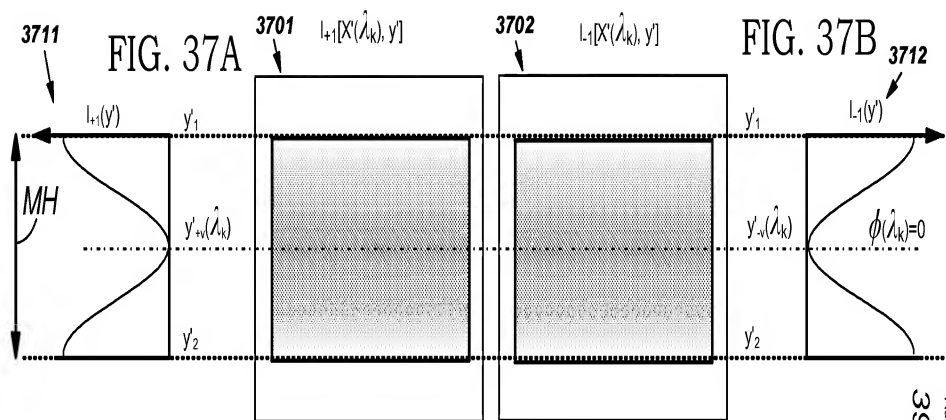


FIG. 38A

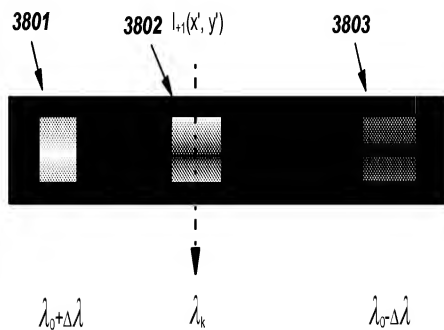


FIG. 38C

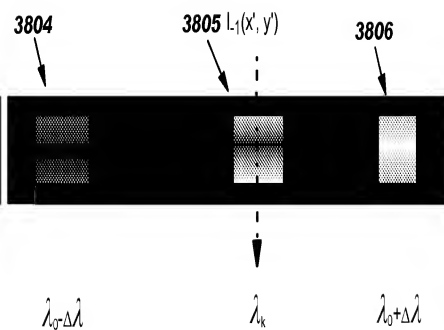


FIG. 38B

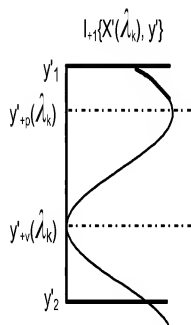


FIG. 38D

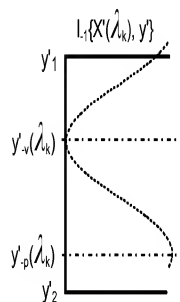


FIG. 39

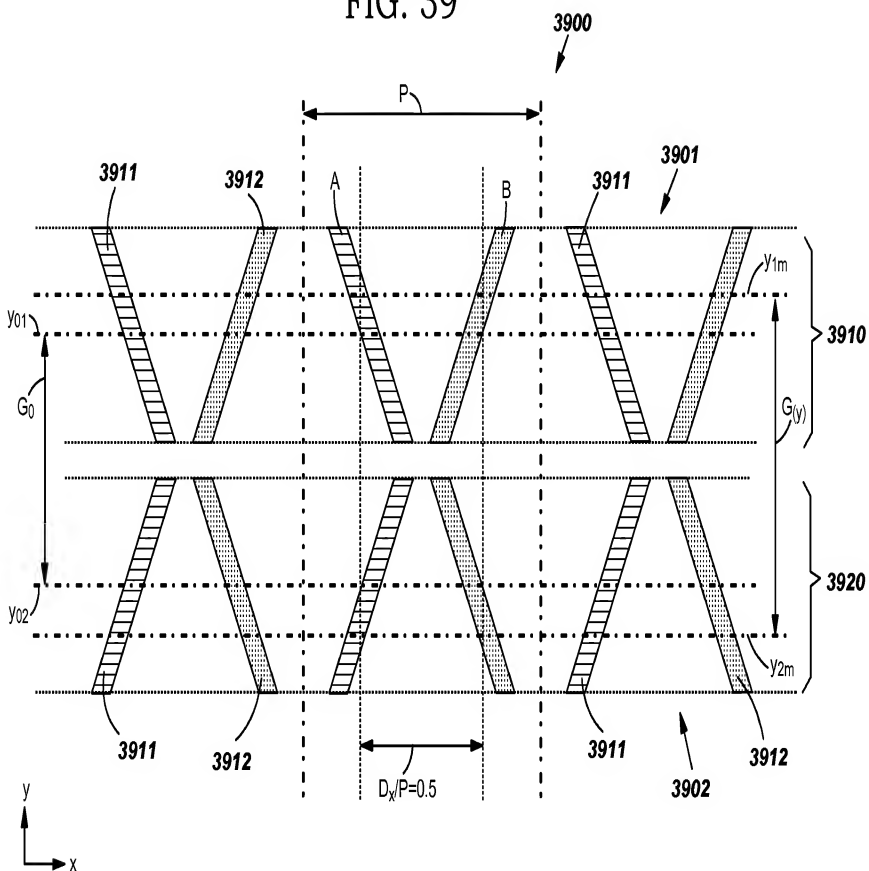


FIG. 40

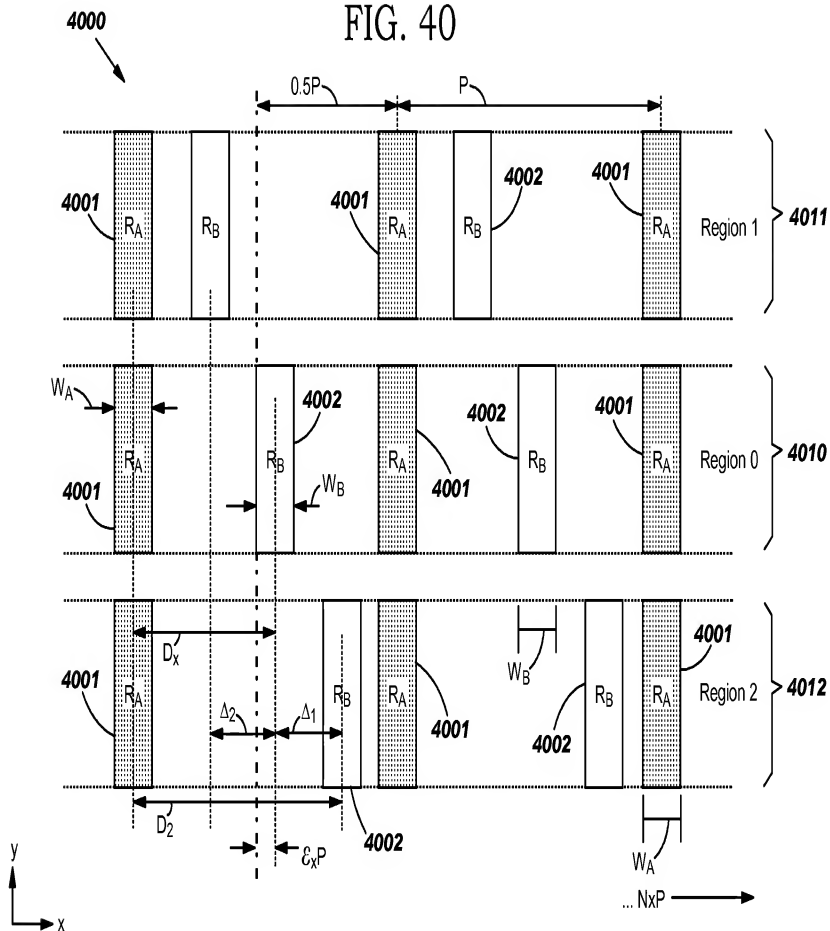


FIG. 41A

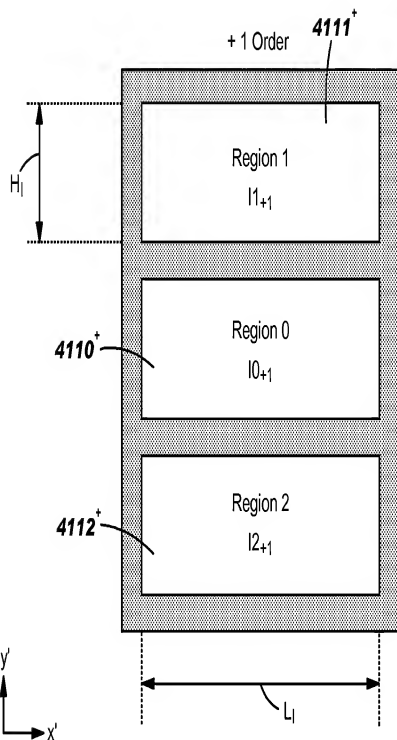


FIG. 41B

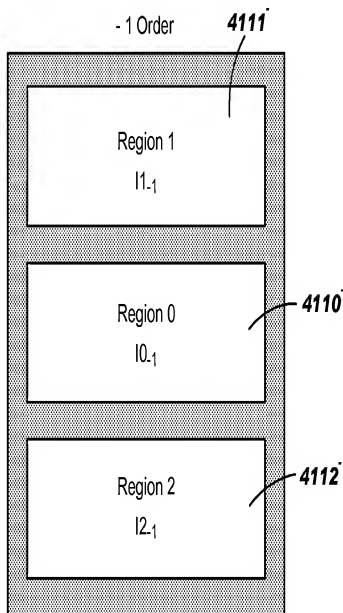


FIG. 42A

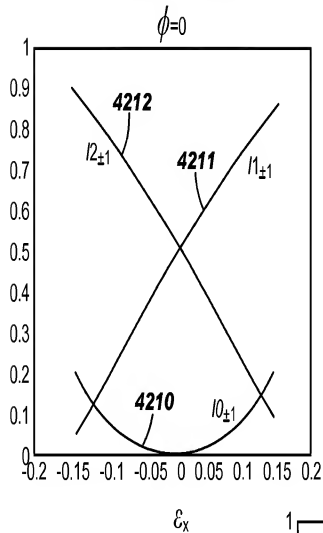


FIG. 42B

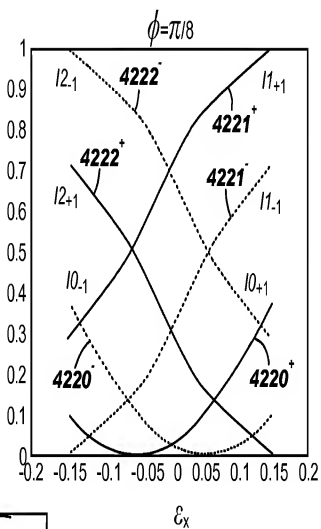


FIG. 42C

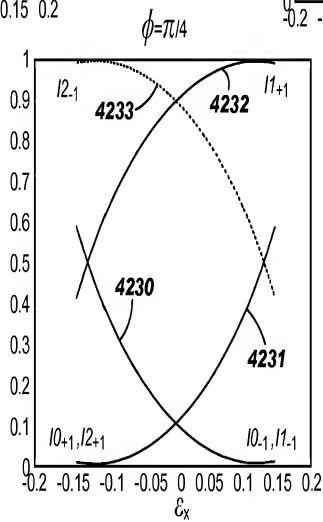


FIG. 43

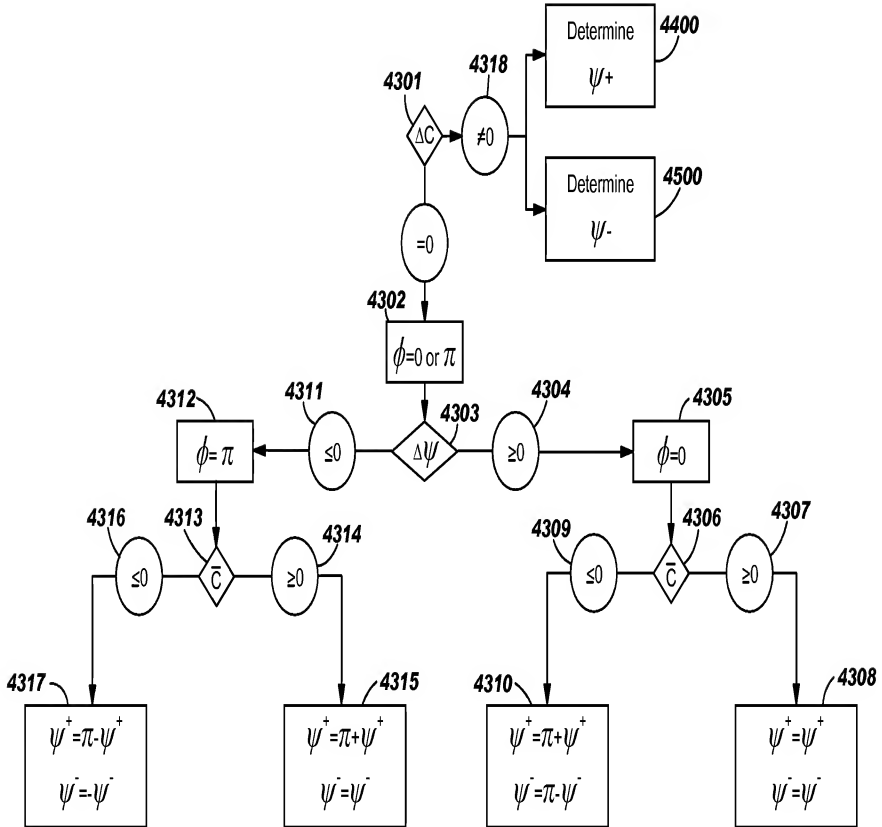


FIG. 44

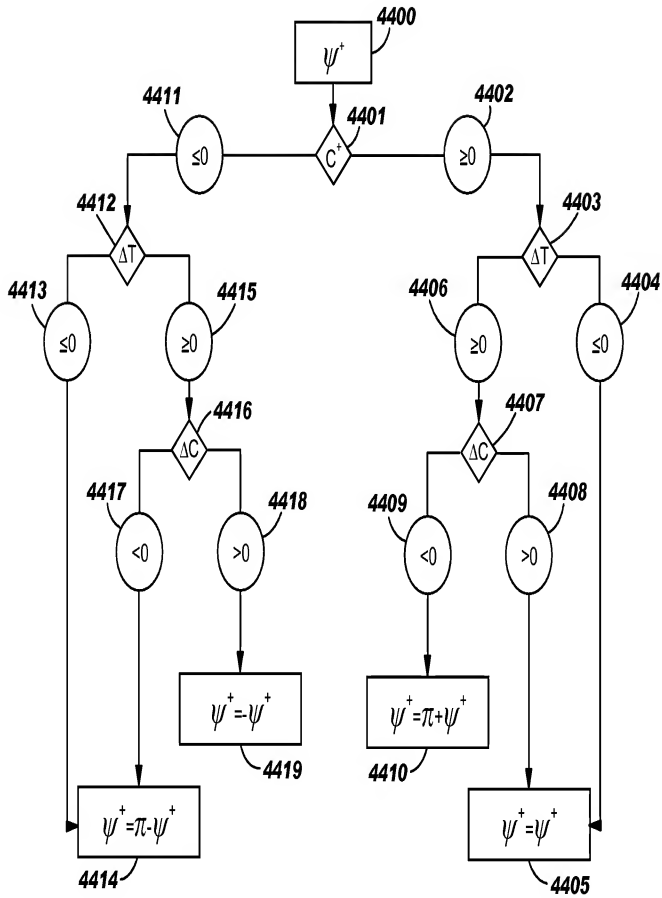


FIG. 45

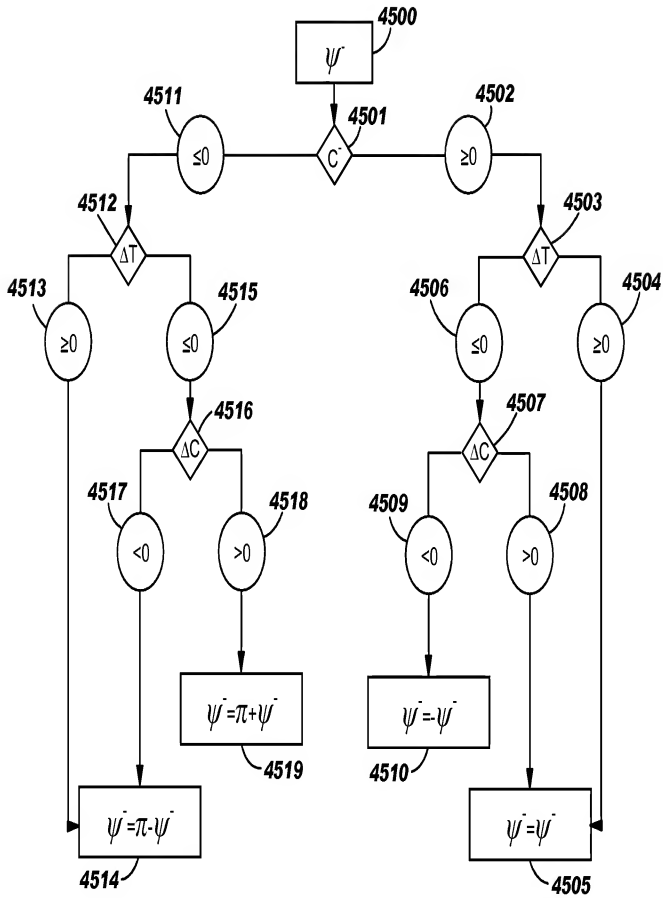


FIG. 46A

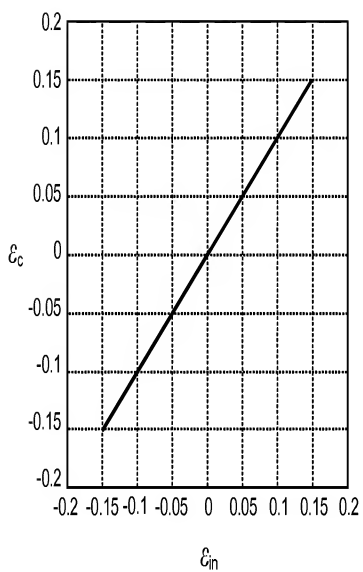


FIG. 46B

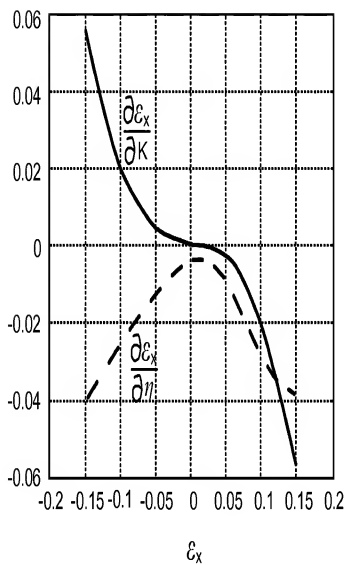


FIG. 47A

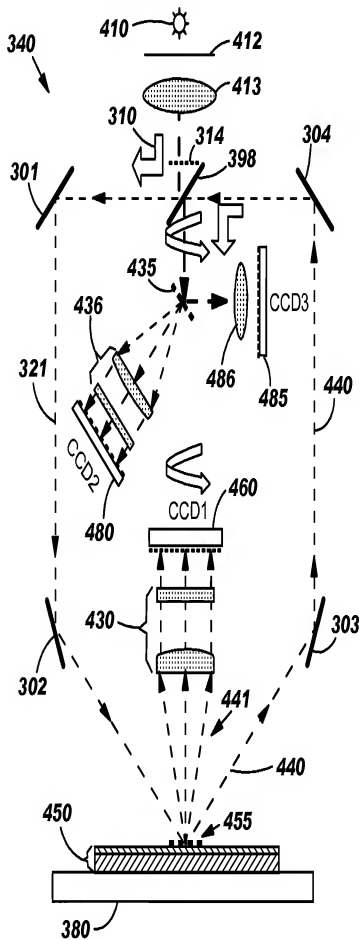


FIG. 47B

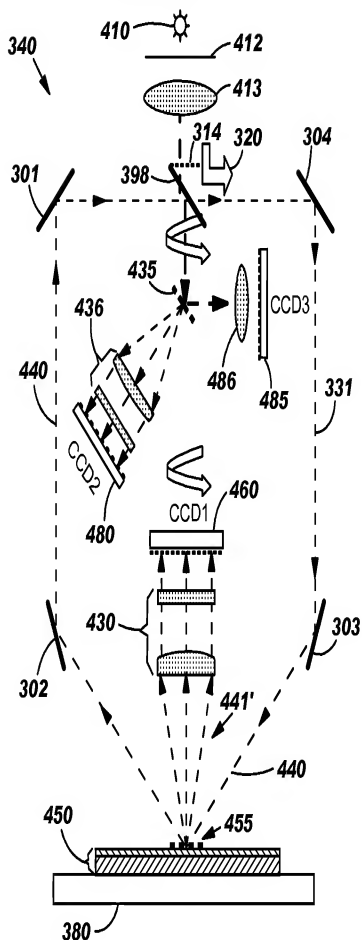


FIG. 48

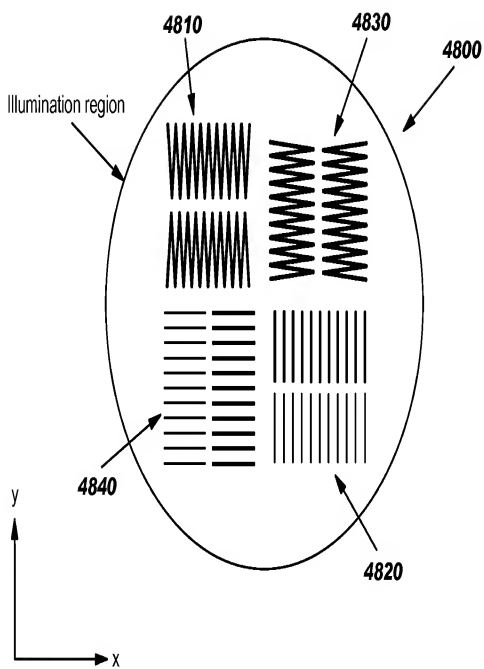
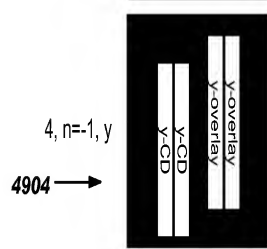
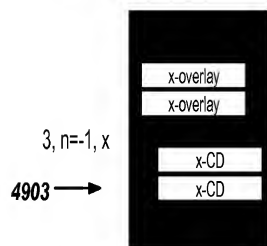
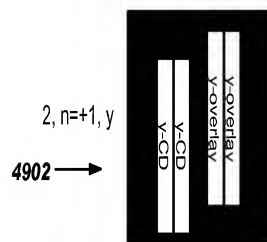
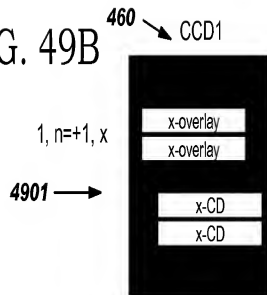
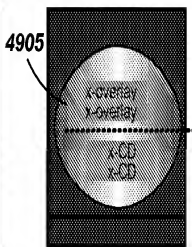


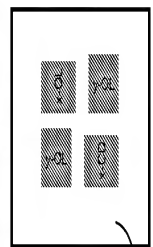
FIG. 49B



460 → CCD1



485 → CCD3



Film stack spectrum

FIG. 49C

FIG. 49D

FIG. 49A

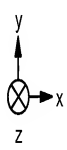
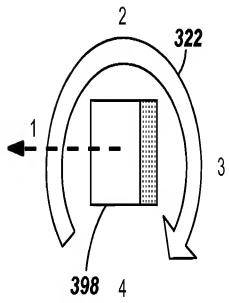


FIG. 50A

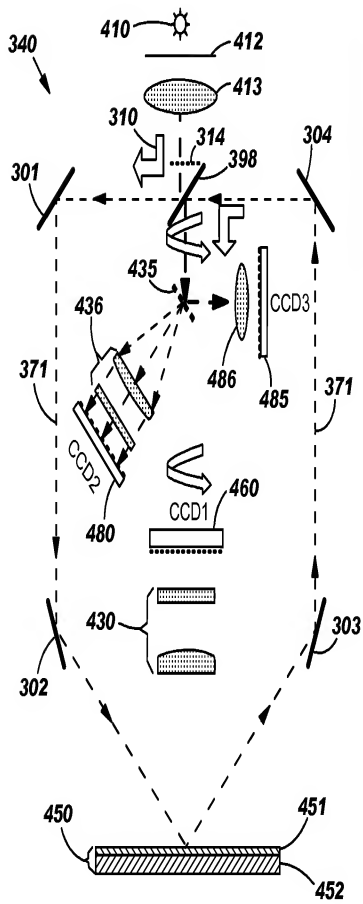


FIG. 50B FIG. 50C FIG. 50D

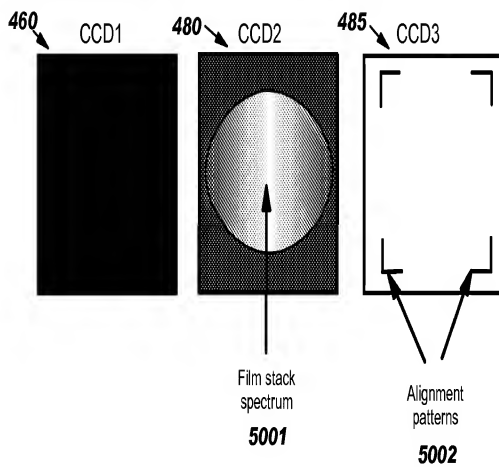


FIG. 52

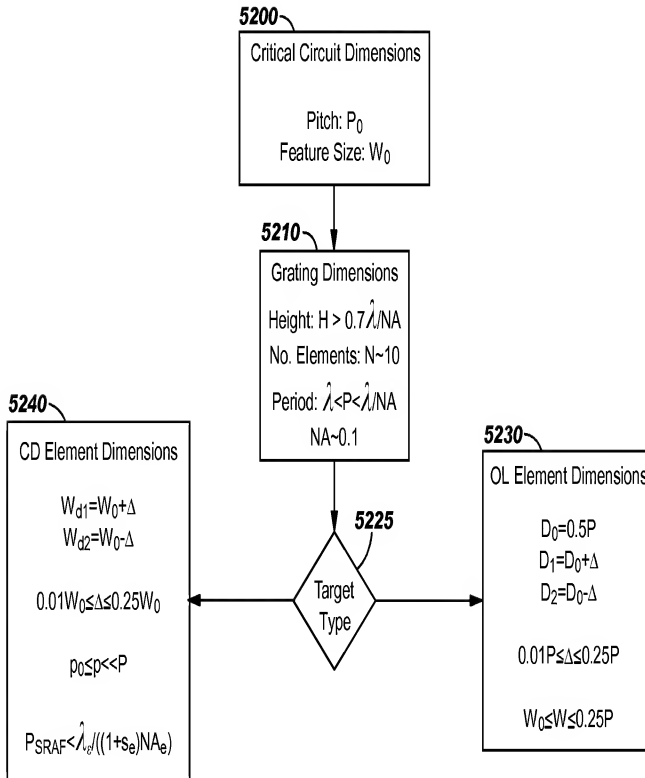


FIG. 53

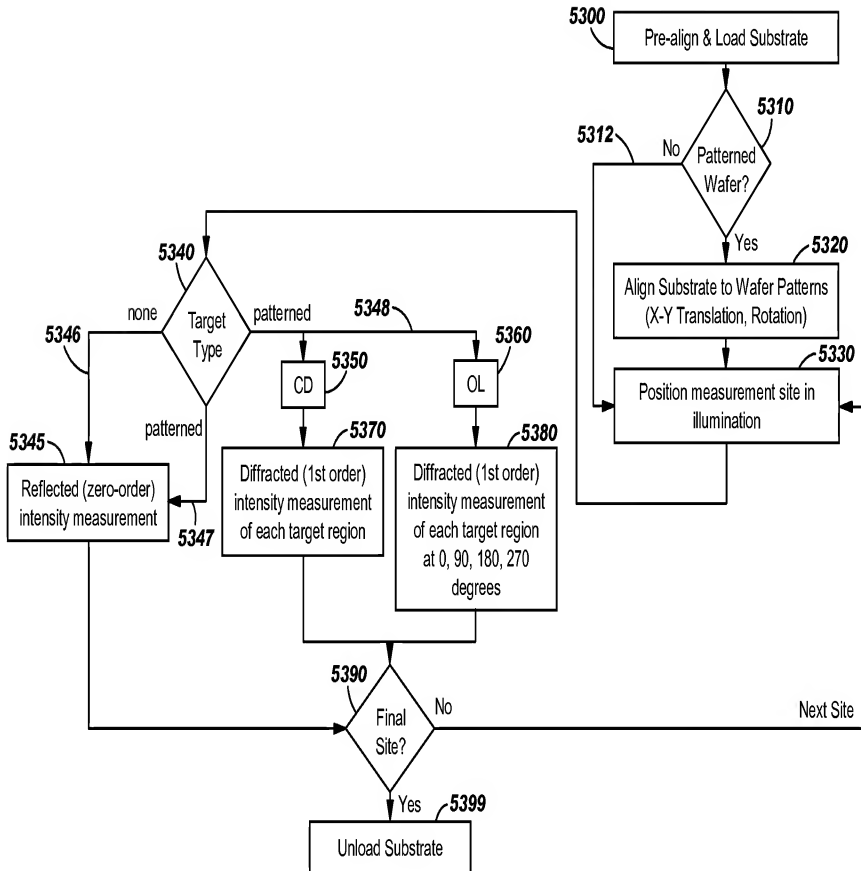


FIG. 54

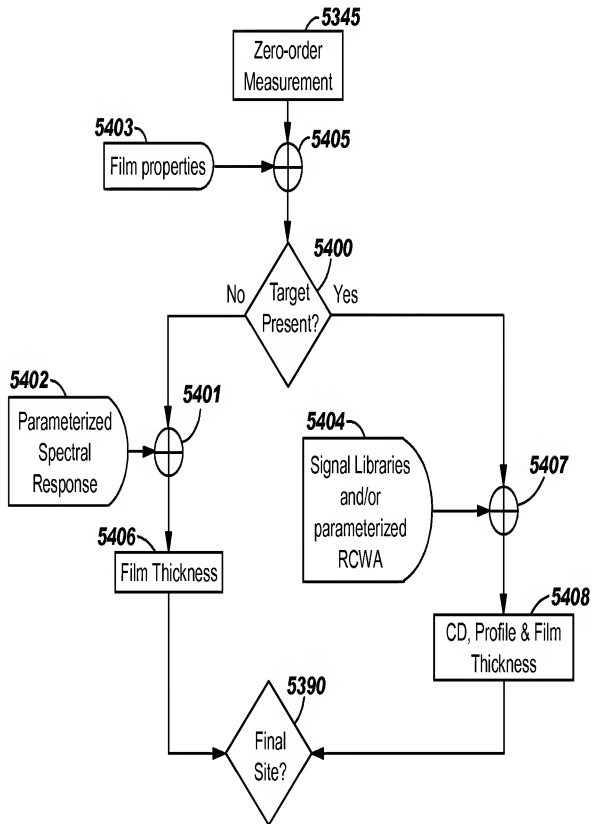


FIG. 55A

